



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Sergey A. Selifonov  
Serial No. : 10/523,050  
Filed : September 22, 2005  
Title : METHODS FOR MAKING (-) - MENTHOL AND OXYGENATED  
MENTHANE COMPOUNDS

Art Unit : 1621  
Examiner : Unknown  
Conf. No. : 7564

**Mail Stop Amendment**  
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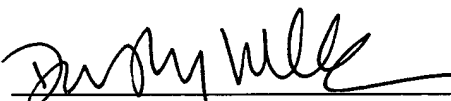
The following correspondence relating to this application is enclosed for filing:

1. Information Disclosure Statement (1 page);
2. Form PTO-1449 (2 pages);
3. Copies of Cited References (24 references); and
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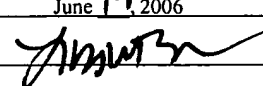
  
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## Attorney's Docket No.: 16219-002US1

Substitute Form PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark OfficeAttorney's Docket No.  
16219-002US1Application No.  
10/523,050**Information Disclosure Statement  
by Applicant**

(Use several sheets if necessary)

(37 CFR 1.98(b))

Applicant  
Sergey A. SelifonovFiling Date  
September 22, 2005Group Art Unit  
1621**U.S. Patent Documents**

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,652,137	07/29/97	Chang et al.			
	AB	5,763,237	06/09/98	Savithiry et al.			
	AC	5,837,458	11/17/98	Minshull et al.			
	AD	6,083,731	07/04/00	Croteau et al.			
	AE	6,171,820	01/09/01	Short			
	AF	6,194,185	02/27/01	Croteau et al.			
	AG	6,306,280	10/23/01	Reipa et al.			
	AH	6,342,644	01/29/02	Sayo et al.			
	AI	6,352,859	03/05/02	delCardayre et al.			
	AJ	6,440,668	08/27/02	Short			
	AK	2002/0183934	12/05/02	Selifonov et al.			

**Foreign Patent Documents or Published Foreign Patent Applications**

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AL	WO 00/09682	02/24/00	WIPO				
	AM	WO 00/31273	06/02/00	WIPO				

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
	AN	GenBank Accession No. AR134847 dated 5/16/01, 2 pages
	AO	GenBank Accession No. AR134848 dated 5/16/01, 2 pages
	AP	GenBank Accession No. AR134849 dated 5/16/01, 2 pages
	AQ	GenBank Accession No. AR134850 dated 5/16/01, 2 pages
	AR	Bell et al., "Engineering the haem monooxygenase cytochrome P450 <sub>cam</sub> for monoterpene oxidation," <u>Chem. Commun.</u> , 2001, pp. 635-636
	AS	Berger et al., "Phoenix Mutagenesis: One-Step Reassembly of Multiply Cleaved Plasmids with Mixtures of Mutant and Wild-Type Fragments," <u>Anal. Biochem.</u> , 1993, 214:571-579
	AT	Crabtree and Davis, "Directing Effects in Homogeneous Hydrogenation with [Ir(cod)(PCy <sub>3</sub> )(py)]PF <sub>6</sub> ," <u>J. Org. Chem.</u> , 1986, 51:2655-2661
	AU	Dillon and Rosen, "A Rapid Method for the Construction of Synthetic Genes Using the Polymerase Chain Reaction," <u>BioTechniques</u> , 1990, 9(3):298-300

Examiner Signature

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 16219-002US1	Application No. 10/523,050
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)		Applicant Sergey A. Selifonov	
		Filing Date September 22, 2005	Group Art Unit 1621
(37 CFR §1.98(b))			

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AV	Duetz et al., "Biotransformation of limonene by bacteria, fungi, yeasts, and plants," <u>Appl. Microbiol. Biotechnol.</u> , 2003, 61:269-277
	AW	Haudenschield et al., "Functional Expression of Regiospecific Cytochrome P450 Limonene Hydroxylases from Mint ( <i>Mentha</i> spp.) in <i>Escherichia coli</i> and <i>Saccharomyces cerevisiae</i> ," <u>Arch. Biochem. Biophys.</u> , 2000, 379(1):127-136
	AX	Ho et al., "Site-directed mutagenesis by overlap extension using the polymerase chain reaction," <u>Gene</u> , 1989, 77:51-59
	AY	Horton et al., "Engineering hybrid genes without the use of restriction enzymes: gene splicing by overlap extension," <u>Gene</u> , 1989, 77:61-68
	AZ	Joo et al., "Laboratory evolution of peroxide-mediated Cytochrome P450 hydroxylation," <u>Nature</u> , 1999, 399(6737):670-673
	AAA	Karp et al., "Monoterpene Biosynthesis: Specificity of the Hydroxylations of (-)-Limonene by Enzyme Preparations from Peppermint ( <i>Mentha piperita</i> ), Spearmint ( <i>Mentha spicata</i> ), and Perilla ( <i>Perilla frutescens</i> ) Leaves," <u>Arch. Biochem. Biophys.</u> , 1990, 276(1):219-226
	ABB	Leffingwell and Shackelford, "Laevo-menthol--syntheses and organoleptic properties," <u>Cosmetics and Perfumery</u> , 1974, 89(6):69-75
	ACC	Lupien et al., "Regiospecific Cytochrome P450 Limonene Hydroxylases from Mint ( <i>Mentha</i> ) Species: cDNA Isolation, Characterization, and Functional Expression of (-)-4S-Limonene-3-hydroxylase and (-)-4S-Limonene-6-hydroxylase," <u>Arch. Biochem. Biophys.</u> , 1999, 368(1):181-192
	ADD	Noma et al., "Biotransformation of Limonene and Related Compounds by <i>Aspergillus cellulosa</i> ," <u>Phytochemistry</u> , 1992, 31(8):2725-2727
	AEE	Prodromou and Pearl, "Recursive PCR: a novel technique for total gene synthesis," <u>Protein Engineering</u> , 1992, 5(8):827-829
	AFF	Schalk and Croteau, "A single amino acid substitution (F3631) converts the regiochemistry of the spearmint (-)-limonene hydroxylase from a C6- to a C3-hydroxylase," <u>Proc. Natl. Acad. Sci. USA</u> , 2000, 97(22):11948-11953
	AGG	van Dyk et al., "Hydroxylation of (+)limonene, (-) $\alpha$ -pinene and (-) $\beta$ -pinene by a <i>Hormonema</i> sp.," <u>Biotechnology Letters</u> , 1998, 20(4):431-436
	AHH	van Rensburg et al., "Biotransformation of (+)limonene and (-)piperitone by yeasts and yeast-like fungi," <u>Biotechnology Letters</u> , 1997, 19(8):779-782
	AII	Wüst and Croteau, "Hydroxylation of Specifically Deuterated Limonene Enantiomers by Cytochrome P450 Limonene-6-Hydroxylase Reveals the Mechanism of Multiple Product Formation," <u>Biochemistry</u> , 2002, 41:1820-1827

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	